IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

CORE WIRELESS LICENSING S.A.R.L., **Plaintiff,** **v.** **LG ELECTRONICS, INC., and LG ELECTRONICS MOBILECOMM U.S.A., INC.** **Defendants.**	**Case No. 2:14-cv-911-JRG-RSP (lead case)** **Case No. 2:14-cv-912- JRG-RSP (consolidated)** **JURY TRIAL DEMANDED**

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

CORE WIRELESS LICENSING S.A.R.L., **Plaintiff,** **v.** **APPLE INC.,** **Defendant.**	**Case No. 6:14-cv-752-JDL** **JURY TRIAL DEMANDED**

CORE WIRELESS LICENSING S.A.R.L.'S
REPLY CLAIM CONSTRUCTION BRIEF – GROUP 1 PATENTS

TABLE OF CONTENTS

Page No.

TABLE OF AUTHORITIES

Page No.

CASES

RULES

I. U.S. PATENT NO. 7,782,818

A. '818 Patent: Claims 30, 41 – "routing area" (Term 1) and Claims 30, 41 – "radio network controller" (Term 2)

Apple misses the point of Core Wireless's argument regarding the term "routing area." The specification shows that the term "routing area" is used for one particular type of cellular system, and other, similar terms (e.g., "location area") are used for other systems, but no distinction is made between the terms for the purpose of the patented invention.[1] There is no evidence or suggestion that the claim drafter used the term "routing area" to exclude all other such terms for other systems, and thus, the generic definition taken from the specification at 1:42-48 proposed by Core Wireless (and largely accepted by LG) is the right interpretation.

Regarding the term "radio network controller," Core Wireless does not believe that construction of this term has sufficient significance to occupy the resources of the Court, and Core Wireless is willing to accept Apple's proposal of plain meaning for this term.

B. '818 Patent: Claim 30 – "an inserter configured to insert the core network identifier to an connection initiating message for establish an connection" (Term 3)

The supporting declaration of Apple's expert, Dr. Seshan, should be ignored because Dr. Seshan applies the wrong legal standard regarding the structure requirement. Dr. Seshan incorrectly believes that, to avoid invocation of § 112(6), a term such as "inserter" must correspond to a "specifically programmed hardware device," "a particular structure," or a "specific structure."[2] Indeed, he even opines that "user equipment" (e.g., a cell phone) "is not a specific structure," because "there are hundreds of different designs for user equipment."[3]

The Federal Circuit rejected exactly this kind of reasoning. As explained in Core Wireless's opening brief, the term "inserter" here is similar to the "detent mechanism" in the *Greenberg* case.[4] It can be implemented in more than one way, but it is still understood by a

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[1] *See* Br., Ex. 3 at 1:40-48.
[2] Resp., Ex. 6 at ¶¶35-37, 39.
[3] *Id.* at ¶42.
[4] *See* Br. at 6-7 (discussing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580 (Fed. Cir. 1996) (term does not need call to mind a particular, single well-defined structure).

person of ordinary skill to have a sufficiently definite meaning as the name for structure. Using the same reasoning, this Court found "processor" and "code" not to be "nonce" words in the *Smartflash v. Apple* case.[5]

Even if Apple were to persuade the Court that "inserter" was a means-plus-function term, the term is not indefinite because Core Wireless has identified corresponding structure in the form of an algorithm in the specification. Dr. Seshan incorrectly concluded that the specification cited by Core Wireless "does not describe a specific algorithm for implementing the addition of information."[6] This again applies a standard that has been rejected by the Federal Circuit.[7]

II. U.S. PATENT NO. 5,946,634

A. '634 Patent: Claims 1, 20 – "formatting device (for applying a low level signal format protocol to a signal for transmission over said wireless interface)" (Term 4)

As a preliminary matter, Defendants improperly try to construe the term "formatting device" in isolation. But "the claim limitation in question is not merely the introductory phrase '[formatting device],' but the entire passage…"[8] Further, the Court must look for description in the "specification or prosecution history that might lead [it] to construe that expression as the name of a sufficiently definite structure as to take the overall claim limitation out of the ambit of § 112, para. 6."[9] Here, ample description exists for a POSITA to determine that "formatting device (13)" for applying low level protocols is the DSP (13).[10]

Even if the Court finds that the term is subject to § 112(6), and further determines an

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[5] *Smartflash LLC v. Apple Inc.*, No. 6-13-CV-477-JRG-KNM, 2015 U.S. Dist. LEXIS 91669 at *8-10 (E.D. Tex., July 7, 2015)(J. Gilstrap).
[6] Resp., Ex. 6 at ¶54.
[7] *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366-67 (Fed. Cir. 2003) (rejecting argument that patent was indefinite for not describing structure for "unlimited number of implementations" and holding that how to perform the specific function "may also be properly left to the knowledge of those skilled in the art, and need not be specified in the patent.")
[8] *Williamson v. Citrix Online, LLC*, No. 2013-1130, 2015 U.S. App. LEXIS 10082, *20 (Fed. Cir. June 16, 2015).
[9] *Id.* at *23.
[10] *See* '634 Br., Ex. 6 at 4:4-6; 4:40-46; 5:25-29; 7:66-8:8; Fig. 2; Br., Ex. 2 [Decl. of Aaron Striegel] ¶¶ 36-49.

algorithm is required, the law "does not require that a particular algorithm be identified if the selection of the algorithm or group of algorithms needed to perform the function in question would be readily apparent to a person of skill in the art."[11] Such is the case here.[12]

B. '634 Patent: "[alternative] high level [signalling] protocol[s]" (Term 5)

Defendants claim that the dispute is over the word "alternative," but there is no reason lay jurors would not understand the word "alternative." Defendants completely ignore the problems with their proposals that Core Wireless identified in its opening brief.[13] Further, Defendants argue that claim differentiation is inapplicable here,[14] but Defendants do not dispute that the term "backbone network" appears in dependent claim 22 but not in independent claim 20.

C. '634 Patent: Claims 22, 23, 25 – "backbone network(s)" (Term 6)

Defendants argue that the patentee's lexicography governs, but the cited language in the patent gives an example of *one type* of GSM backbone, *not* a definition for all backbones. Ten thousand acres of piney woods "make up" a forest, but that does not mean the definition of a forest is ten thousand acres of piney woods. Similarly, the specific components identified in the patent, including the MSCs, "make up" ***a*** GSM backbone network, but the patent explicitly covers other backbones, including GSM evolutionary networks like UMTS.[15] Accordingly, if any construction is needed, Core Wireless's more general language should be adopted.

D. '634 Patent: Claim 22 – "means for selecting a backbone network based on said received type signal" (Term 7)

As clarified in Defendants' brief, Apple is improperly trying to incorporate an algorithm here that would require "receiving," "detecting," "selecting," and "routing" for this term that is

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[11] *Aristocrat Techs. Austl. Pty Ltd. v. Multimedia Games, Inc.*, 266 Fed. Appx. 942, 947 (Fed. Cir. 2008).
[12] Unlike *Triton Tech*, cited by Defendants (Resp. at 4-5) Core Wireless is not solely arguing that undisclosed algorithms would be known to a POSITA. Core Wireless is also arguing that the patent specification indentifies industry standards that disclose the algorithms, which is sufficient. *Aristocrat*, 266 Fed. Appx. at 947.
[13] Namely, that they improperly try to import "separate and incompatible backbone networks" without support and misquote the specification to say "network layer or above" instead of "and above."
[14] Resp. at 6.
[15] Br., Ex. 6 at 2:38-40. The patentee did not intend to define backbone networks as only containing MSCs.

only about "selecting."[16] They also incorrectly state Core Wireless's position; Core Wireless does believe that 7:39-52 provides a description of the claimed "selecting." Because Defendants' proposal is overbroad, Core Wireless's precise language should be adopted.

E. '634 Patent: Claim 1 – "a control unit for …" (Term 8); Claim 4 – "control unit is further operable for…" (Term 9); and Claim 20 – "a control unit for …" (Term 10)

In a footnote, Apple tries to distinguish this Court's holding in *Smartflash* that the term "processor" connotes sufficient structure to take claims outside the ambit of § 112(6).[17] It argues that there were other words being construed in that case besides "merely 'code' and 'processor,'" but confusingly claims that, here, this "is not the case for 'control unit.'"[18] This is simply inaccurate. The terms for construction here must include the remaining portions of the claims.[19] These terms have sufficiently definite meaning and are not subject to § 112(6). If the Court determines an algorithm is required, Core Wireless's is appropriate, while Apple has provided no justification for its indiscriminate passage selection for all these terms.[20]

III. U.S. PATENT NO. 6,633,536

A. '536 Patent: Claims 1, 9, 17, 19 – "bad state" and "good state" (Terms 11 and 12)

Core Wireless and LG have similar definitions of "bad state." Both are taken from the definition provided in the patent at 6:58-63. Given the language of the specification ("A 'bad frame' within the context of the present application means . . . ," followed by the definition), Apple's completely different and inconsistent construction is implausible. In addition to ignoring the explicit definition in the specification, Apple is requesting that the Court define "bad state" to correspond to the way the term was used in the *prior art*, before the inventors

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[16] Resp. at 7. The "court cannot require the structure in the accused device to perform functions that are not present in the claim." *Applied Med. Research Corp. v. United States Surgical Corp.*, 312 Fed. Appx. 326, 332 (Fed. Cir. 2009).

[17] Resp. at 8, n.6; LG did not identify this term as subject to § 112(6).

[18] *Id.*

[19] *Williamson*, 2015 U.S. App. LEXIS 10082 at *20.

[20] Apple criticizes Core Wireless's construction as "equally overlapping," but the structural overlap, which is appropriately allocated by function, exists for good reason – the claim language is similar.

explicitly *redefined* the term in the specification of the '536 patent. The purported basis of Apple's proposed construction is the file history, where Apple takes a murky statement made about the prior art to be the patented invention.

Core Wireless is frankly puzzled by Defendants' allegations that the proposed contructions of good and bad state are circular or inconsistent. Core Wireless is saying that the definition of "bad state" is "X," and the definition of "good state" is the opposite, "not X." That is not circular. And there is nothing inconsistent about the definitions. A "bad frame" has been marked in some way so that it may be checked to see if it contains a signaling message. A "good frame" is not so marked. "Good frames" are normal good speech frames. "Bad frames" are not normal good speech frames. A frame cannot be simultaneously "good" and "bad" under the patent's explicit definitions, which are what Core Wireless is proposing.

B. '536 Patent: Claim 1 – "unique bit for each individual message, placing the corresponding bit pattern into a transmission frame" (Term 13)

LG makes much of what appears to be a simple typographical error made by the Patent Office after allowance of the claims. It is clear from the context of the claim that the claim is intended to read "for each different message, defining a corresponding unique bit pattern; for each individual message, placing the corresponding bit pattern into a transmission frame."[21] This is also clear from the file history. As discussed in Core Wireless's opening brief, the second use of the phrase "unique bit" was not part of the allowed claims.[22] If the Court believes that this minor issue will cause any confusion to the jury, it has the power to correct the claim.[23]

C. '536 Patent: All Asserted Claims – "bit pattern" (Term 14)

The first half of Apple's proposed construction attempts to limit the term "bit pattern" to

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[21] The operative question is whether a POSITA would understand the bounds of the claim when read in light of the specification. *Personalized Media Commc'n., L.L.C. v. ITC*, 161 F.3d 696, 705-706 (Fed. Cir. 1998). Here, a POSITA can do just that. *See, e.g.*, Br., Ex. 12 [Decl. of Richard Chandler], ¶¶ 75-76. In contrast, the claim in the case that LG cites, suffered from a abrupt truncation of the claim element where it was impossible to make sense of the claim. *Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002).

[22] And the applicant never requested the inclusion of this phrase. *See, e.g.*, Br. at 18, n.69.

[23] *CBT Flint Partners, LLC v. Return Path, Inc.*, 654 F.3d 1353, 1358 (Fed. Cir. 2011) ("It is well-settled law that, in a patent infringement suit, a district court may correct an obvious error in a patent claim").

to the preferred embodiment, "a sequence of bits conveying a signaling message." But the term "bit pattern" itself is not limited to this meaning because claims are not limited to the preferred embodiment. Core Wireless does not agree at all with the second half of Apple's proposed construction, "not a code word that delineates a message." Apple appears to be attempting to pull this phrase from the file history, but, as pointed out in Core Wireless's opening brief, Apple does not actually use the language of the file history itself but instead improperly broadens it to create the purported disclaimer that it wishes the Court to recognize.

D. '536 Patent: Claims 1, 17 – "restricting the number of consecutive frames marked as messages to a sufficiently low number so as not to substantially impair the quality of the user information" (Term 15)[24]

Defendants ignore the clear disclosures in the intrinsic record of the '536 patent that inform a POSITA on the scope of this claim phrase and that were highlighted in Core Wireless's opening brief.[25] Even the *Nautilus* case that Defendants cite confirmed that "in assessing definiteness, claims are to be read in light of the patent's specification and prosecution history."[26] Here, the patent clearly provides guidance and specific examples for a POSITA to understand the bounds of this claim phrase.[27]

E. '536 Patent: Claim 19 – "replacing means for replacing a bad frame at least partly with a preceding good frame" (Term 17)

The corresponding structure for the "replacing means" is whatever carries out the function of just that — the replacing. But the Defendants attempt to broaden the scope of the replacing means by also including the decoder which may supply a good frame for the replacing means to replace a bad frame with. Defendants base their improperly broad construction solely on a Federal Circuit case concerning a mounting means.[28] In that case, however, the specification clearly described a variety of structures that all performed the function of mounting the frame, including the stem guide, stem, screws, mounting brackets, etc., and thus all of those

[24] LG's argument for Term 16 ("inserting a bit pattern…") fails for the same reasons discussed herein.
[25] Br. at 20-21.
[26] *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128 (2014).
[27] Br. at 20-21.
[28] Resp. at 22.

components were a part of the mounting means.[29] Here, the decoder does not perform any part of the function of replacing.

IV. U.S. PATENT NO. 6,477,151[30]

A. '151 Patent: Claim 14 – "for both the uplink and downlink channels" (Term 18)

Defendants argue incorrectly that Core Wireless's construction would read "downlink channel" out of the claims. To the contrary, it clarifies the intended use of the term consistent with the specification and file history. Defendants do not dispute that downlink channels do not themselves require a timing advance value (TAV) – but each downlink channel *does* send acknowledgements in the opposite (uplink) direction, which require a TAV.[31] That is what claim 14 is referring to when it recites "advanc[ing] transmission slots for . . . the . . . downlink channels" – it is referring to advancing transmissions of the *uplink acknowledgement messages* associated with downlink channels as described at 2:34-38 – and that is what Core Wireless's proposed construction clarifies. Absent this clarification, Core Wireless fully expects Defendants to attempt to make a specious non-infringement argument to the lay jury based on a deliberate misreading of the patent claims and specification – they will assert that they do not infringe because the downlink channels themselves do not need to use TAVs.

Defendants take the examiner's reference to this phrase out of context to try to manufacture an issue, but in the reason for allowance the other claim language – that itself supports Core Wireless's construction – was also relied on. Indeed, the examiner noted that the claims "advance transmission slots *at the mobile station* for both the uplink and down link channels…so that transmitted data *is received at the base station subsystem*…"[32] which *unequivocally refers to transmissions in the uplink direction*. And the patentee during

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[29] *Bernard Dalsin Mfg. Co. v. RMR Prods., Inc.*, 10 Fed. Appx. 882, 887 (Fed. Cir. 2001).
[30] LG only addresses Term 23 ("a single timing advance index") in its Response at footnote 8. LG has provided no jusitification for rewriting the claim language, including adding "uplink and downlink channels" when the claim already states "all user data channels."
[31] See Br., Ex. 13 at 2:34-38.
[32] Resp., Ex. 4, [2002-06-17 Reason for Allowance at 2] (emphasis added).

prosecution made this clear to the examiner in the final correspondence: "Thus, both the uplink and downlink channels will share the same timing advance value for *transmissions in the uplink direction…*"[33] Because Core Wireless is not attempting to broaden a claim that was narrowed during prosecution, the case Defendants cite is inapposite.

B. '151 Patent: Claims 13, 14 – "data" (Term 19)

Defendants confuse the dispute here. With this term, Core Wireless does not seek to construe "user data." Only where the claims use the word "data" without a qualifier is construction necessary to clarify that it can be either user or signaling data.

C. '151 Patent: Claim 14 – "receive a timing advance value once" (Term 20)

Defendants cannot even agree on a proposed construction, but both their individual proposals suffer the same problem – they seek to improperly rewrite the claim language. Defendants now agree that the Court may strike their proposed language, "once per every eight mulitiframes" or "per each multiframe structure." While helpful, this is not a complete solution, because the remaining language would leave the jury with the wrong impression that the value is received only one time forever, which is clearly contrary to the patent.[34]

D. '151 Patent: Claim 14 – "in the allocated base station subsystem reception slots" (Term 21)

In its opposition, LG makes clear that it is improperly trying to include language that would import network limitations into this mobile station claim in an attempt to avoid infringement. LG offers no justification or reason for rewriting the claim language, and Apple agrees with Core Wireless that no construction is necessary. With respect to construction of "base station subsystem," however, just because one of skill in the art would understand the term does not mean the jury would. Thus, Core Wireless's construction for this term is helpful.

E. '151 Patent: Claims 13, 14 – preamble phrase is not limiting (Term 22)

The preamble states: "a mobile station for use in a radio telephone network, **the radio telephone network comprising** …[other language Apple identifies], the mobile station being

[33] *Id.* [2002-04-01 Applicant's Remarks] at 10 (underlining in original).
[34] *See, e.g.*, Br., Ex. 13 at 2:29-31.

configured to:" The network-side language Apple points to describes the intended use of the mobile station in the network, and network features, not features of the claimed mobile station. These types of "use descriptions . . . are rarely treated as claim limitations."[35] First, Apple's insistence that anything following the word comprising is part of the claims is a generalization that clearly does not apply here; rather, the language preceding "configured to" constitutes the preamble.[36] Second, use of the word "the" in the body of the claims (e.g., the base station subsystem) does not automatically require an antecedent basis because they are understandable on their face.[37] Third, both parties acknowledge that the language Apple points to is not the invention, but rather the invention is described in the body of the claims. Finally, there was no clear reliance on the benefits in this phrase as patentably significant.[38]

V. U.S. PATENT NO. RE44,828[39]

A. '828 Patent: Claims 16, 20, 25 – "said at least one requested quality of service parameter" (Term 25)

This term does not require construction. LG argues that "at least one quality of service parameter" lacks antecedent basis, making the claims unclear as to which QoS parameter corresponds to the received channel coding scheme – whether it is the requested quality of service parameter or possibly another one." But there is nothing unclear in the claims. The "said at least one quality of service parameter" refers to "at least one requested quality of service parameter" mentioned earlier in the same claim.[40] The word "requested" was removed during

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[35] *Marrin v. Griffin*, 599 F.3d 1290, 1294 (Fed. Cir. 2010).

[36] *See, e.g., Eagle Harbor Holdings, LLC v. Ford Motor Co.*, No. C11-5503 BHS, 2013 U.S. Dist. LEXIS 163111, *15 (W.D. Wash. Nov. 13, 2013) ("limitations following the preamble or the 'configured to' transition would define the requirements of the [claim.]").

[37] *See, e.g., Wis. Alumni Research Found. v. Apple, Inc.*, 14-cv-062-wmc, 2015 U.S. Dist. LEXIS 103031, *50-58 (W.D. Wis. Aug. 5, 2015) (claim not indefinite for use of definite article "the" without antecedent basis). Further, even if the preamble provided some antecedent basis, the law states that this *may* create a limitation. *Catalina Mktg. Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (preamble is limiting "only if the applicant clearly and unmistakably relied on those uses or benefits to distinguish prior art.")

[38] *STX, LLC v. Brine, Inc.*, 211 F.3d 588, 591 (Fed. Cir. 2000) (preamble not a limitiation).

[39] For Term 27 ("…communication connection") Core refers the Court to its opening brief at 29.

[40] LG also states that "CW could have pointed to the specification to say that 'said at least one quality of service parameter'" is the same "requested quality of service parameter," used earlier in the claim. Resp.

prosecution to be consistent with the previous claim language.

B. '828 Patent: Claims 17, 24, 26 – "high service precedence, short mean delay, and short maximum delay" (Term 26)

The terms "high service precedence, short mean delay, and short maximum delay" need no construction and are not indefinite. As explained in Core Wireless's opening brief, the specification shows that these adjectives are used to describe specific communication desired by the mobile station.[41] These words reasonably describe the scope of the claim to a POSITA.

C. '828 Patent: Claim 20 – "a processor configured to apply said channel coding scheme …" (Term 28)

As Apple admits, this Court has already held in a recent case that the term "processor" should not be construed as a means-plus-function term.[42] This alone should end the inquiry. But even if the Court decides to construe this term as a means-plus-function term, Core Wireless has shown that the specification discloses a special purpose control block that performs the "apply[ing] said channel coding scheme . . . ." limitation.[43] Core Wireless has also shown that even if the Court determines an algorithm is necessary, there is sufficient algorithmic support in the specification.[44] Apple and its expert incorrectly argue that no "passages in the patent cited by CW discloses an algorithm for applying a channel coding scheme."[45] But, as explained by Dr. Mahon, a POSITA "would understand that for a mobile station to operate correctly (or at all), performing the bearer allocation or reconfiguration necessarily means applying the selected channel coding that is part of the bearer allocation/reconfiguration at the mobile station."[46]

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at 29. This is exactly what Core Wireless pointed and points to.

[41] Br. at 28-29.

[42] Resp. at 28 ("Apple respectfully recognizes, however, that this Court held to the contrary in *Smartflash v. Apple*, No. 6:13-cv-447-JRG-KNM, 2015 WL 4208754 (E.D. Tex. July 6, 2015)").

[43] Br. at 30.

[44] *Id.*

[45] Resp. at 28.

[46] Br., Ex. 4 [Decl. of Mark Mahon], ¶48.

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Respectfully Submitted,

By: */s/ Henry C. Bunsow*

Henry Bunsow (California State Bar # 60707)
Brian A.E. Smith (California State Bar # 188147)
BUNSOW DE MORY SMITH & ALLISON LLP
351 California Street, Suite 200
San Francisco, CA 94104
Telephone: (415) 426-4747
Facsimile: (415) 426-4744
Email: hbunsow@bdiplaw.com
Email: bsmith@bdiplaw.com

Denise M. De Mory (California State Bar #168076)
Craig Y. Allison (California State Bar # 161175)
BUNSOW DE MORY SMITH & ALLISON LLP
701 El Camino Real
Redwood City, CA 94063
Telephone: (650) 351-7248
Facsimile: (650) 351-7253
Email: ddemory@bdiplaw.com
Email: callison@bdiplaw.com

T. John Ward, Jr.
State Bar No. 00794818
E-mail: jw@wsfirm.com
Wesley Hill
State Bar No. 24032294
E-mail: wh@wsfirm.com
WARD & SMITH LAW FIRM
P.O. Box 1231
1127 Judson Rd., Ste. 220
Longview, Texas 75606-1231
(903) 757-6400 (telephone)
(903) 757-2323 (facsimile)

ATTORNEYS FOR PLAINTIFF
CORE WIRELESS LICENSING S.A.R.L.

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Dated: August 24, 2015

/s/ Henry C. Bunsow
Henry C. Bunsow